

## ABSTRACT

The present innovation is directed to a single-chip integrated circuit power amplifier configured to employ the efficiency enhancement techniques utilized in Doherty amplifiers. The single-chip integrated circuit power amplifier may be implemented using uniquely designed biasing circuits as described herein. Also, the use of combined HBT/FET processes and a lumped quarter-wavelength transformer may be inherently well suited for the implementation of Doherty amplifiers in the single-chip techniques described herein.